

REMARKS

Claims 1-29 are pending in the application. Claims 24-25 stand rejected. The Examiner is thanked for indicating the allowance of claims 1-23 and 26-29. Claims 24-25 have been amended. New claim 30 has been added. In view of the following, it is respectfully submitted that all claims are in condition for allowance.

Rejection of Claim 25 Under 35 U.S.C. 112, Second Paragraph

Claim 25 has been amended. Accordingly, claim 25 now stands in condition for allowance.

Rejection of Claims 24-25 Under 35 U.S.C. 102(b) As Being Anticipated By Lee

Claim 24

Claim 24 as amended recites a circuit, comprising a differential input stage having first and second input nodes operable to receive a signal having a first frequency and first and second output nodes that respectively have first and second capacitances, and a filter coupled to the first and second output nodes and operable to form at substantially the first frequency first and second parallel resonant tank circuits with the first and second capacitances, respectively.

For example, referring, e.g., to FIGS. 1-4 and paragraphs 30-44 of the present application, an active mixer 100 comprises a first stage, or input stage 105, and a second stage, or output stage 110. An LC filter 125 is coupled to common source nodes S1 and S2. The LC filter 125 may be a "T" filter, comprising a first and a second inductors L1 and L2, with a first terminal connected to the common source nodes S1 and S2, respectively, and a second terminal connected to a first plate of a capacitor C, having a second plate connected to the ground GND. The filter 125 acts as a parallel resonator for differential signals at a parallel resonance frequency. The filter 125 acts as a series resonator for common-mode signals at a series resonance frequency f_s . By sizing the inductance L of both the inductors L1 and L2 so that the parallel resonance frequency f_p is equal to f_{RF} (the frequency of the radio-frequency input signal), the parallel resonance of the filter 125 causes parasitic capacitances

Cpar,1 and Cpar,2 to be cancelled, thereby improving the mixer performance in terms of linearity.

Lee, on the other hand, fails to teach the limitations of claim 24. Lee, at, e.g., paragraph 16 and FIG. 5, discloses a conventional double-balanced mixer 50 with a series connection of a parallel LC tank circuit. The LC tank circuit is used to eliminate the addition of the noise signals generated by a bleeding circuit. However, the mixer 50 of Lee does not function in the recited manner for at least the reasons that the inductor L1 is not taught as being equal to the inductor L2, and the mixer does not include a capacitor to ground.

Claim 25


Claim 25 is patentable by virtue of its dependency from claim 24.

CONCLUSION

In view of the foregoing, Applicants believe that all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested. If the Examiner believes that a telephone conference would expedite prosecution of this application, please telephone the undersigned at (425) 455-5575. **If the Examiner does not agree that all pending claims are in condition for allowance, the Examiner is respectfully requested to contact the undersigned to arrange a discussion of the application prior to issuing an Advisory action.**

Respectfully submitted,
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